

INTERNATIONAL SEARCH REPORT

PCT/IB 03/02785

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K51/12 A61K47/48 A61K49/00 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, EMBASE, BIOSIS, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | SIMIONESCU L ET AL: "The development of a radioimmunoassay system for testosterone (T) and dihydrotestosterone (DHT). Part 2. The preparation of antisera to T." ENDOCRINOLOGIE. ROMANIA 1990 JUL-DEC, vol. 28, no. 3-4, July 1990 (1990-07), pages 107-125, XP008014908 ISSN: 0253-1801 abstract | 1,6 |
| X | US 5 945 279 A (POWER RONAN F ET AL) 31 August 1999 (1999-08-31) claims ----- -/-- | 1,6 |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

25 November 2003

Date of mailing of the international search report

02/12/2003

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | RAMIREZ V D ET AL: "Membrane receptors for estrogen, progesterone, and testosterone in the rat brain: fantasy or reality." CELLULAR AND MOLECULAR NEUROBIOLOGY. UNITED STATES APR 1996, vol. 16, no. 2, April 1996 (1996-04), pages 175-198, XP008014894 ISSN: 0272-4340 table 1 | 1-9 |
| X | ----- BENTEN W P ET AL: "Functional testosterone receptors in plasma membranes of T cells." THE FASEB JOURNAL: OFFICIAL PUBLICATION OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY. UNITED STATES JAN 1999, vol. 13, no. 1, January 1999 (1999-01), pages 123-133, XP002234365 ISSN: 0892-6638 cited in the application figures 1,3 | 1-9 |
| Y | ----- US 6 416 737 B1 (MANOLAGAS STAVROS C ET AL) 9 July 2002 (2002-07-09) sentence 0199 | 1-25 |
| P,X | ----- KAMPA MAEILENA ET AL: "The human prostate cancer cell line LNCaP bears functional membrane testosterone receptors that increase PSA secretion and modify actin cytoskeleton." THE FASEB JOURNAL: OFFICIAL PUBLICATION OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY. UNITED STATES SEP 2002, vol. 16, no. 11, September 2002 (2002-09), pages 1429-1431, XP002234364 ISSN: 1530-6860 abstract; figure 3 | 1-9 |
| P,X | ----- PAPAKONSTANTI EVANGELIA A ET AL: "A rapid, nongenomic, signaling pathway regulates the actin reorganization induced by activation of membrane testosterone receptors." MOLECULAR ENDOCRINOLOGY (BALTIMORE, MD.) MAY 2003, vol. 17, no. 5, May 2003 (2003-05), pages 870-881, XP0008024806 ISSN: 0888-8809 abstract | 1 |
| P,Y | ----- abstract | 1-25 |

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: -

Present claims 1-25 relate to an extremely large number of possible compounds. In fact, the claims contain so many options that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and concise), namely compounds have been searched recited in the examples and closely related homologous compounds.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 22-23 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|---|----|---------------------|----------------------------|--------------------------|
| US 5945279 | A | 31-08-1999 | US 5834213 A | 10-11-1998 |
| US 6416737 | B1 | 09-07-2002 | AU WO | 1525700 A 0028982 A2 |
| | | | | 05-06-2000 25-05-2000 |